

November 7, 1962

To:

From:

File
Dynamic
STAT

Re: Type III S/N 2 Preliminary Flight Test Data

Enclosed is a preliminary copy of the target run plots of flight test #3 which you requested. We have not completed our flight test analysis and so can draw only tentative conclusions:

1. There appears to be platen-tilt which degrades the results on the left compared to those on the right of the format as viewed in the enclosure.
2. We have not yet found the correct altitude focus.
3. There appear to be some cases of considerable aircraft motion.

If the runs were perfectly true and smooth the plots would be straight lines with uniform distance between readings. Departures from straight lines are roll and yaw motions and departures from uniform spacing along the lines are pitch motions. We cannot separate buffeting from auto pilot performance and there is reason to believe we were operating near the limit of the lower buffet zone in this flight.

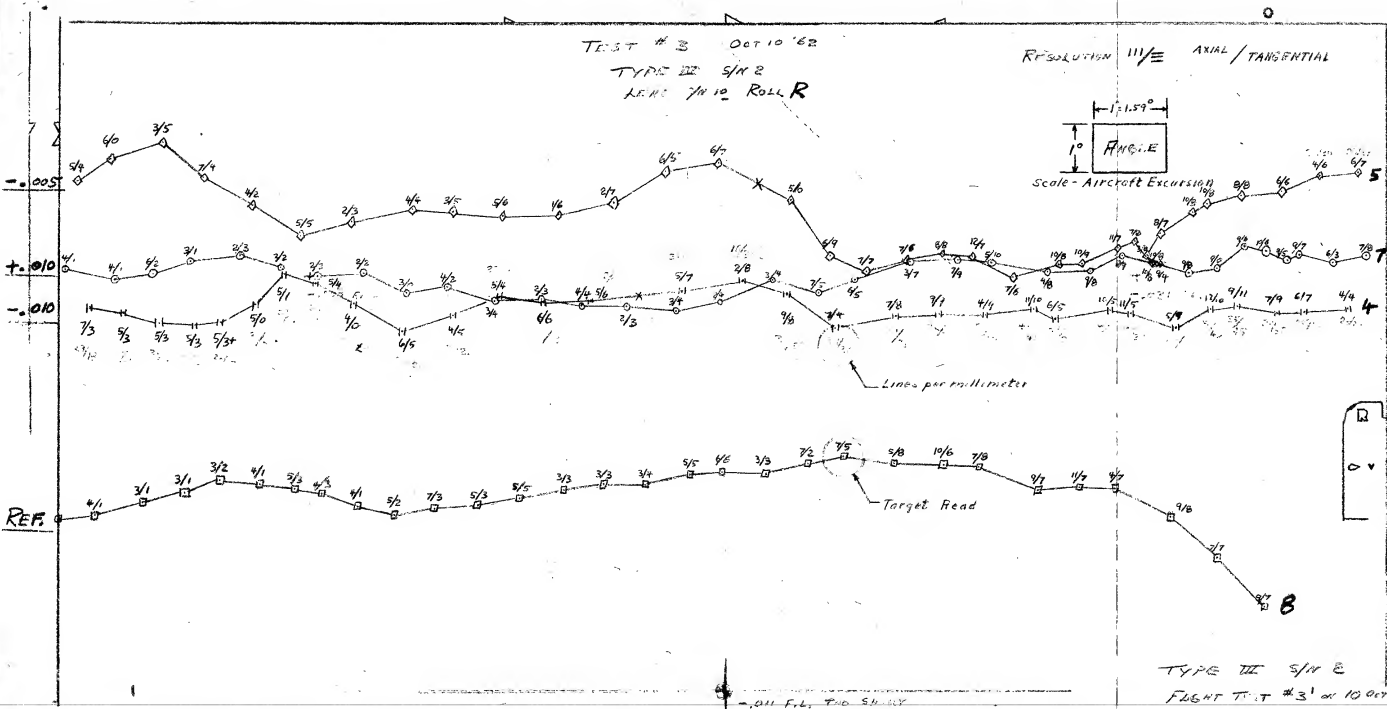
The target numbers correspond to the Class A pattern numbers of the Wright Field drawing #PHO-59-594. For run 4 the target numbers have been converted to lines per millimeter resolution.

The runs are numbered to indicate separate passes over the targets with the platen in different focus positions as follows:

<u>Run</u>	<u>Platen Position</u>
8	Ground Collimated Focal Length (reference position)
7	plus .010" (longer) focal length
5	minus .005" (shorter) focal length
4	minus .010" (shorter) focal length

The runs were made with the unit in the vertical position only without the oblique drive operating. More complete data will be available when all the flight test data has been assembled and analyzed.

25 YEAR RE-REVIEW



Run 5, 36 FRAMES
START FRAME 949
END " 984
PLATE POS #2 (-0.005)

Run 7, 34 FRAMES
START FRAME 1309
END " 1337
PLATE POS #4 (-0.010)

Run 4, 32 FRAMES
START FRAME 682
END " 713
PLATE POS #1 (-0.010)

Run 8, 29 FRAMES
START FRAME 1428
END " 1516
PLATE POS "REF"

TYPE III S/N E
FLIGHT TEST #31 OCT 10 '62